

or to a space within an enclosed superstructure, must have a hinged inside deadlight which is designed so that it can be secured watertight over the side scuttle.

(c) A side scuttle of a superstructure end bulkhead door, companionway door, or deckhouse door may have a portable inside deadlight which is designed so that it can be:

(1) Secured watertight over the side scuttle; and

(2) Stowed inside the superstructure, companionway, or deckhouse when not in use, in a readily accessible location on or adjacent to the door.

[CGD 73-49R, 38 FR 12290, May 10, 1973, as amended by CCGD 80-116, 46 FR 56788, Nov. 19, 1981]

#### § 45.141 Manholes and flush scuttles.

Manholes and flush scuttles in position 1 or 2 or within any superstructure other than an enclosed superstructure must have permanently attached covers, unless the cover is secured by closely spaced bolts around its entire perimeter.

#### § 45.143 Hull openings above freeboard deck.

Closures for openings above the freeboard deck must be as strong as the structure to which they are attached and must be weathertight.

#### § 45.145 Hatchway covers.

(a) Hatchways in position 1 and 2 must have weathertight hatch covers with gaskets and clamping devices.

(b) The maximum ultimate strength of the hatchway cover material must be at least 4.25 times the maximum stress in the structure calculated with the following assumed loads:

(1) For ships 350 ft or more in length, at least 250 lb/ft<sup>2</sup> in position 1 and 200 lb/ft<sup>2</sup> in position 2.

(2) For ships less than 350 ft in length, at least  $AL$  in the following formula:

(i) Position 1:

$$AL=200+C$$

where  $C=50(L-79)/271$

(ii) Position 2:

$$AL=150+C$$

(c) Hatchway covers must be so designed as to limit the deflection to not more than 0.0028 times the span under the loads described in paragraph (b) of this section and the thickness of mild steel plating forming the tops of covers must be at least 1 percent of the spacing of stiffeners or 0.24 in, whichever is greater.

#### § 45.147 Hatchway coamings.

(a) Except where the Commandant determines that the safety of the vessel will not be impaired in any sea condition, each hatchway must have a coaming that is at least—

(1) 18 inches in position 1; and

(2) 12 inches in position 2.

(b) Each hatchway coaming required by this section must be made of steel or equivalent material.

(c) The height of these coamings may be reduced or omitted if the Commandant is satisfied that safety of the ship is not thereby impaired in any sea conditions.

#### § 45.149 Machinery space openings.

(a) Machinery space openings in position 1 or 2 must be framed and enclosed by steel casings, and where the casings are not protected by other structures that meet the requirements of § 45.109, their strength must be approved by the Commandant or the assigning authority.

(b) Access openings in casings required by paragraph (a) of this section must have doors complying with the requirements of § 45.113. Other openings in such casings shall be fitted with equivalent covers, permanently attached.

(c) Except as provided in paragraph (d) of this section, coamings of any funnel or machinery space ventilator that must be kept open for the essential operations of the ship must—

(1) In position 1, extend at least 12.5 ft above the deck; and

(2) In position 2, extend at least 6 ft above the deck.

(d) The Commandant may approve a lesser height for protected coamings.

(e) Coamings of any fiddley or skylight over a machinery space opening in the freeboard or superstructure deck or the top of a deckhouse on the freeboard deck, must have covers of